Engineering Open House

The News-Gazette

Souvenir Edition

Champaign-Urbana — The Home Of The University of Illinois

Vol. LXIII. No. 227. ALL 3 WIRE Services — UP, INS, AP SATURDAY, MARCH 15, 1958.—10 Pages ★★★ Price Five Cents

UI ENGINEERS MEET CHALLENGE

Vast Facilities Offered By University

GROUND OR AIR OR SPACE, IT'S GOING ON HERE

15 Classrooms, Labs 65,000 Volumes Are Provided On Campus

Whether it's glass-blowing, analysis of light or atom smashing—the University of Illinois College of Engineering has developed more than 15 main buildings full of facilities and equipment where students can "make realities of drawings" for the modern world.

One of the largest engineering campuses in the country, the College features large, well-equipped laboratories, modern tools and spacious classrooms in addition to special equipment needed for extra research.

As part of its rapid and vigorous expansion program, the UI has started building a new Physics Building, to be completed in 1961. The first unit and equipment, costing an estimated $5,425,000 and financed by state appropriations, will be completed by August, 1959.

In close cooperation with the Argonne National Laboratory, Atomic Energy Commission center for nuclear reactor design, the College of Engineering has plans under way for materials to keep pace with the nuclear age and the advanced engineering training which will be needed, including a boiling-water loop for reactor power utilization studies, apparatus for a series of basic nuclear metallurgy experiments, and instrumentation for a nuclear measurements laboratory.

In the field of "atomic brains," the UI has developed Illiac, a high-frequency digital computer.

It boasts one of the country's first cyclotrons and its atom smashing "kissing cousin," the Betatron, developed by a UI professor, and now able to deliver 20 million to 400 million volts.

Highlights of the College's equipment lineup include:

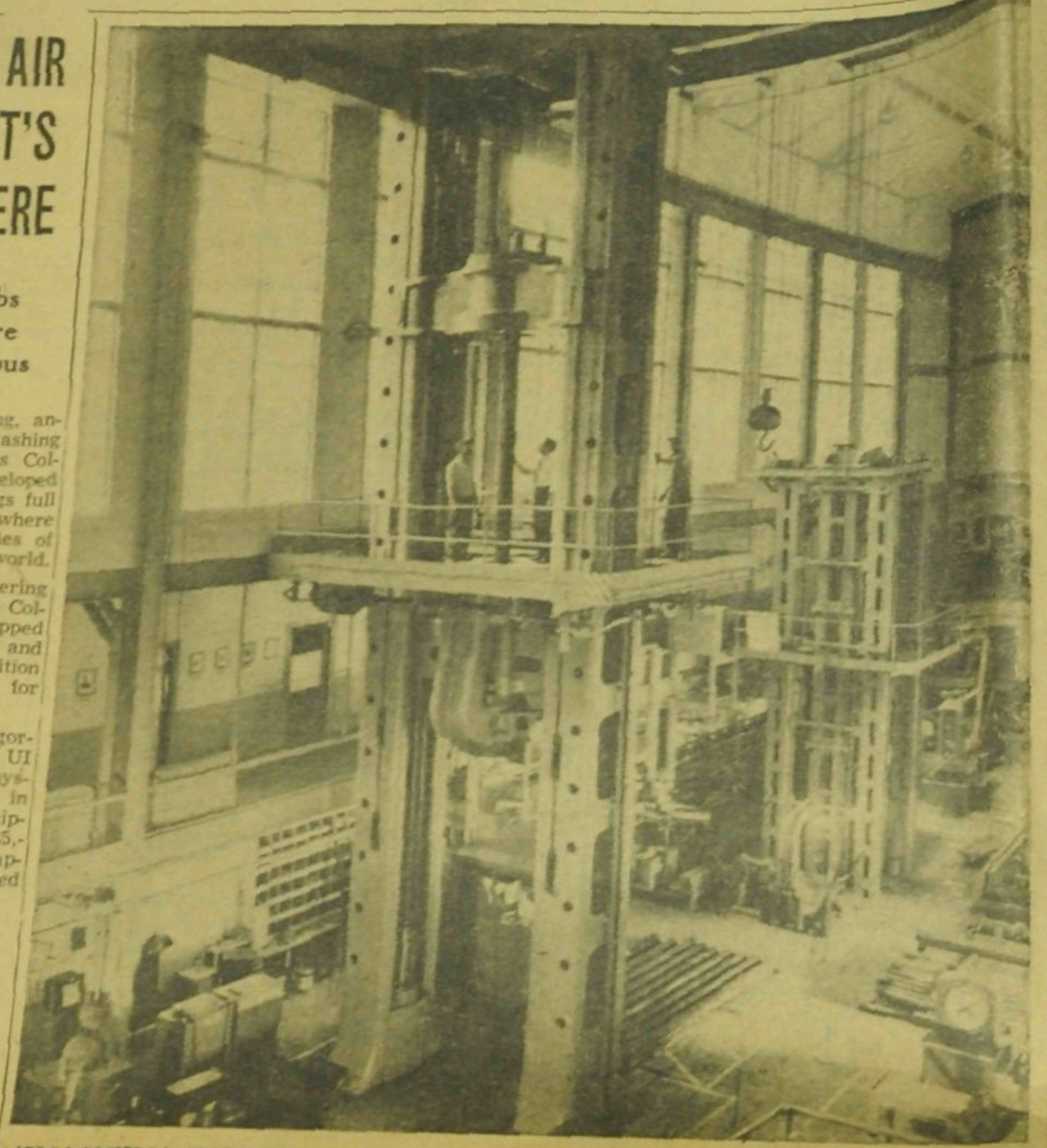
A ten-ton crane, ten testing machines capable of exerting forces up to 50,000 . 200,000 pounds; centrifugal pumps which can furnish 13,500 gallons of water per minute with a head of 35 feet; a heavily reinforced concrete floor, 16 inches thick, in a testing laboratory.

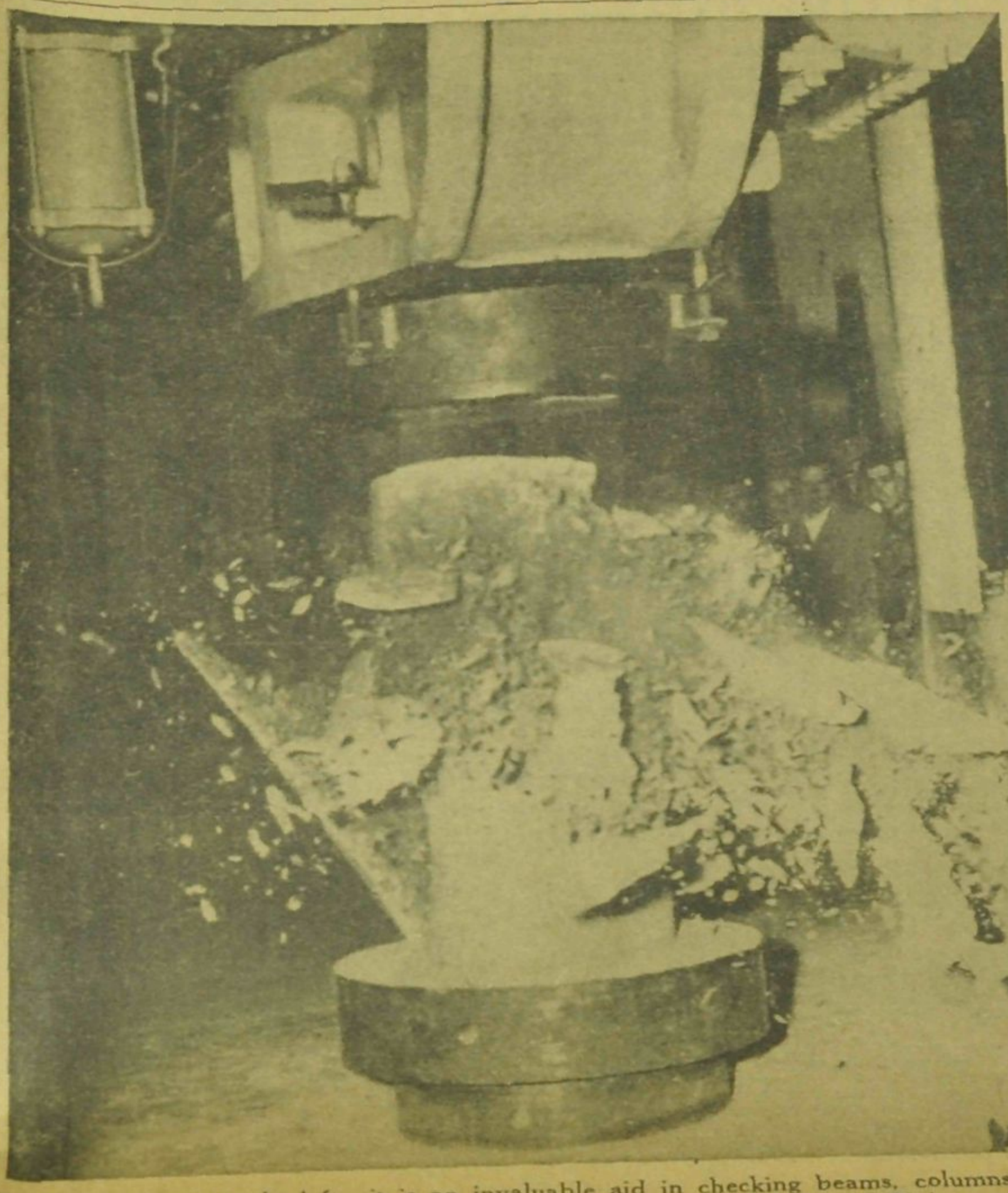
Vibrators, drying ovens and refrigerating units; a machine for testing railway cars and brake shoes which can operate at train speeds equivalent to 100 miles per hour.

Radium sources amounting to 350 milligrams; electric and magnetic measurements in vacuum tube circuits; a lab for biophysics and work in light and spectroscopy; welding booths, voltmeters, experimental electrometallurgy equipment, arc-melting furnaces and endless-belt grinding machines.

There are more than 20 drafting and drawing rooms, each designed to accommodate just enough students so that element of some personal instruction can be maintained.

To supplement the wide scope of class instruction, technical literature is available in the vast storehouse of the Engineering Library, with some 65,000 volumes. Over 650 technical journals are received here, and another 55,000 volumes on engineering is housed in the University's General Library, one of the most extensive in the world.





'SMASHING' SUCCESS: CAUSE . . . AND EFFECT. The Theoretical and Applied Mechanics Department of the University of Illinois College of Engineering annually claims a "smashing" success for one of its exhibits at the Open House—the 3 million [illegible] machine. The three-story high structure, one of the largest in the Midwest, is checked over by UI officials in the left picture before the boom is lowered. At the right is the result as a large concrete cylinder is reduced to rubble. But the testing [illegible] erting tremendous force in either tension or compres[illegible] it is an invaluable aid in checking beams, columns and joints for loading and types of failure. Without such a machine, the knowledge of behavior of large or complex [illegible]

STUDENTS SEE GREAT SCHOOL IN OPERATION

Come From All Illinois To Observe Training During 'Open House'

By BILL LYON
News-Gazette Staff Writer

High school students from throughout the state today were introduced to the challenge of engineering and how it is being met in University of Illinois classrooms. The students were in Champaign-Urbana f[or] the seventh annual College of Engineering Open House.

The College threw open its lab and classroom doors and, through 133 specially-prepared student exhibits, revealed the means by which one of the country's best engineering colleges trains the men of tomorrow to forge the world of tomorrow in industry, in research and in teaching.

From the construction of present bridges on the ground to bridging space, the exhibits illustrated how engineers are trained in the use of materials, men and money for the service of mankind.

Youthful local visitors saw firsthand displays of engineering prowess which conquered the engineering challenge of the past, is conquering the challenge of the present, and is preparing to conquer the challenge of the future.

The conquest of space and nuclear energy, they learned, will pose the challenge of the future, and the UI College of Engineering has already geared itself to the demands of the nuclear age. It is moving swiftly toward a soundly balanced nuclear education program, which now includes e[illegible] special courses and instruc[illegible] ing space, from [illegible] T-square calculations [illegible] measurements of rocket craft to sanitary engineers who will be confronted with the problem of removal of radiation and atomic waste, metallurgy majors who must develop special alloys to stand the gaff of outer space and bio-engineers to make interplanetary travel safe.

The touring high school students also learned how engineers are conquering the challenge of the present by widening and strengthening the horizon of human progress on the ground and in the air.

They saw this proof in 15 buildings. It was dramatically demonstrated in transportation.

They saw the exacting detail and precision used by engineers to test building materials until combinations of concrete and steel, which are practically indestructable, have been accomplished.

And from the world of yesterday, they saw how UI engineers have taken the basic fundamentals developed by their pioneering predecessors which, for example, enabled man to speak long distances through physics and electrical engineering.

And they learned that UI engineering graduates comprise an extensive list of who's who, including the developer of the Betatron, the transistor, the first talking pictures, skyscrapers and bridges which have withstood earthquakes and men who contributed to the launching of America's first satellite.

They learned from the past, present and future challenges the UI met and will meet that the word "engineering" means a better civilization.

UI SCHOLARSHIP LIST GROWING STEADILY

A new scholarship has been added to the growing list of financial aid and awards available to University of Illinois Engineering students, the Scholarship Committee of the College of Engineering announced.

Two International Telephone and Telegraph Corp. scholarships, each worth $750 for one year, have joined the ranks. They are renewable and will be given annually to undergraduates in electrical engineering, physics or mathematics upon recommendation of the Committee.

Other financial aids include an award from the Hamilton Watch Co., to encourage a greater understanding of social sciences and humanities among engineering students; the Wiley Scholarship, for summer travel; the Armco scholarship; Ira O. Baker first prize for the outstanding civil engineering student of the year.

The Epstein Award; the Leslie Abbott Rose Award for engineering students with technical excellence as well as a cultural background; Mining Engineering scholarships, available to all graduates of accredited high schools, including two groups of four-year durations.

Scholarships at the UI, of which the College of Engineering has a large share, include 2,700 offering free tuition and 600 more providing cash award.

Engineering Challenge

We are glad to welcome you to the Urbana-Champaign campus, and are happy that you have been able to attend Engineering Open House. We hope that the opportunity to see classrooms, laboratories, and exhibits will dramatize for you some of the fascination and importance of the engineering profession, as well as the high standards and quality of preparation increasingly demanded by engineering practice.

Engineering is steadily coming to be more important both to our nation and for the modern world. The challenge of more difficult and more complicated problems is rising just as rapidly. There is a continuing need both for more and ever better engineers, and a promising future in industry, in research, and in teaching. The conquest of space, of the atom and nucleus, of new power sources, new materials, new means of transportation and communication, plus solutions for all the resulting human problems, demands the very best efforts from all of us.

We in engineering education are constantly improving the quality of instruction in both level and breadth, including basic and engineering sciences, advanced areas of professional specialization, and humanistic studies.

The better your preparation for college, the faster and farther we can advance you up the lengthening trail of professional competence. With our balance of extensive high-level research and graduate degree programs, set against our varied undergraduate offerings in all fields, we at the University of Illinois are especially well-equipped to help you meet these demands of modern engineering.

It has been a pleasure to have you as our guests, to show you a few of our activities here and of the possibilities in engineering and education for the future. We trust that you have enjoyed your stay with us, and the exhibits prepared and displayed for you by our student body. We hope, too, that you, your faculty advisers and families, and your schoolmates will come to see us again.

W. L. EVERITT,
Dean, College of Engineering.

PROF. BARDEEN, NOBEL WINNER, ON UI STAFF

Included on the University of Illinois Engineering and Physics staff is a member who captured the greatest scientific honor available — the Nobel Prize.

Dr. John Bardeen, 48, professor of electrical engineering and physics became the first UI faculty member on the Champaign-Urbana campus to win the award when he and two other physicists — Dr. Walter Brattain and Dr. William Shockley — received the physics prize in 1956 for their invention and development of the point contact transistor, now making revolutionary changes in the radio and telephone industries.

Dr. Bardeen and his co-workers split the $38,633 three ways and were presented the highly coveted prize by King Gustav VI of Sweden.

Although the transistor is no longer than the tip of Dr. Bardeen's little finger, it has been hailed as an advance comparable in its importance to the invention of the vacuum tube 50 years ago.

"Even more, it has become a repeatedly cited symbol of the benefits that can and do result from basic research in the physical world and the dizzy speed with which fundamental discoveries are being translated into practical application immediately usable to all of us," declared Dean William L. Everitt.

Diana Pitches Pulses:

UI Is Receiving Radio Signals From Moon

The University of Illinois is conducting experiments which may lead to the control of rocket craft in outer space by bouncing radio waves off the moon.

Using a huge nine ton parabolic reflector on top of the Electrical Engineering Building, members of the moon watch project are playing a space game of catch, snagging radio waves which are hurtled at the lunar body by Diana, a radar transmitter at Ft. Monmouth, N. J., and reflected off it.

Prof. H. D. Webb, head of the project, predicted that this may be the first step in pioneering interplanetary space travel — sending radio commands to craft in lunar space and receiving radio reports on the galaxy in return.

"The moon is serving as a high class radio relay station for basic UI research to study the characters of the waves shot through outer space," explained Prof. Webb.

And every three months the UI sends their reports on the quick two-way trip away from our earth to the Signal Corps for analysis.

When Diana pitches her pulses some 250,000 miles, only a very few are recovered. Transmission power is 40,000 watts, and only about 100 of these ever reach the moon.

"And by the time these are scattered all over the universe, we receive but one-millionth of one-billionth of one watt," Prof. Webb pointed out.

But this is enough.

The web-like 28-foot diameter UI antenna picks off the waves while they are traveling 186,000 miles per second. There is no slow motion involved in their 500,000 mile trek—they make it in two and a half seconds.

Made of steel and aluminum and including a highly restricted antenna, the EE device was erected last June and has been in operation since mid-summer.

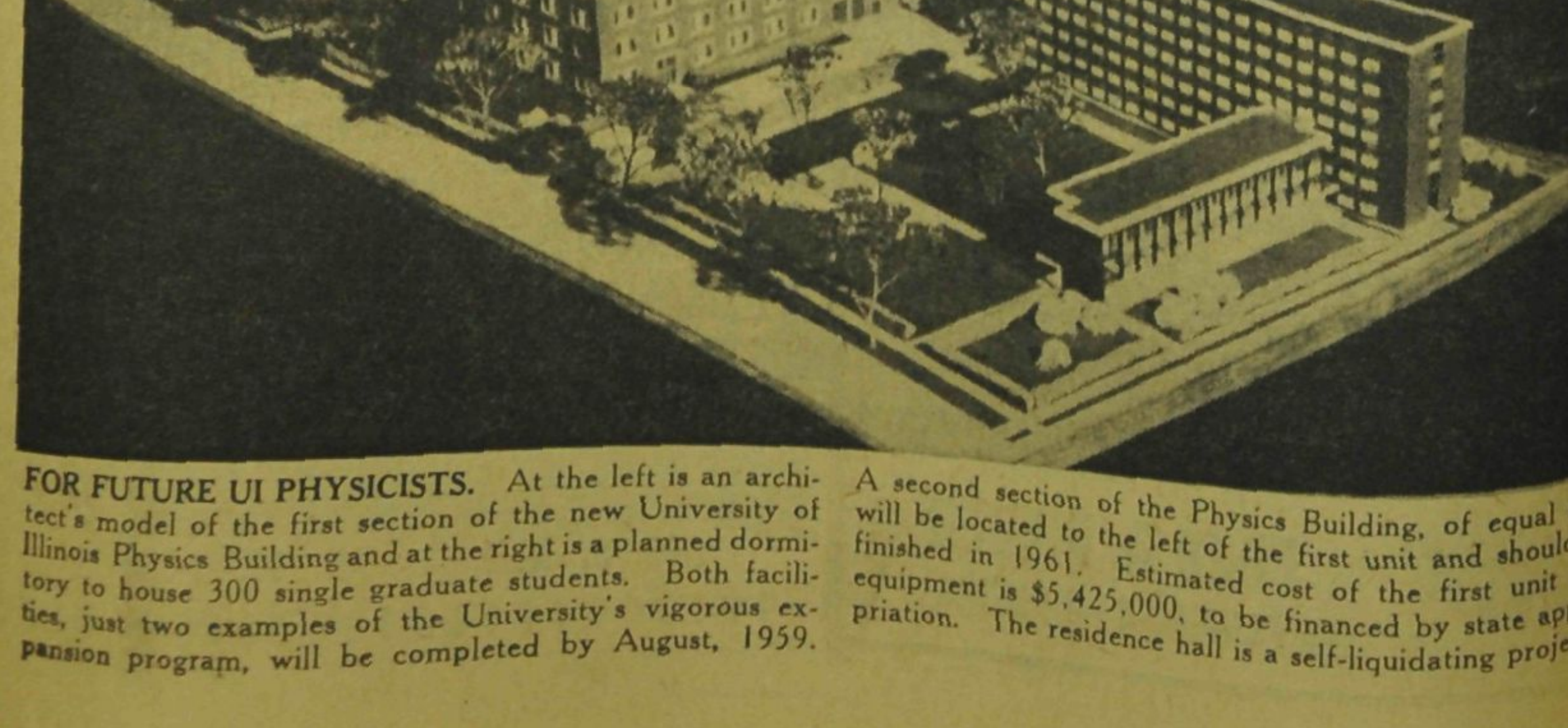
The reflector cost $55,000 and the antenna, excluding installation and modifications which were made on the building, $100,000.

The UI's contract with the Signal Corps has been extended until July 31, 1958.

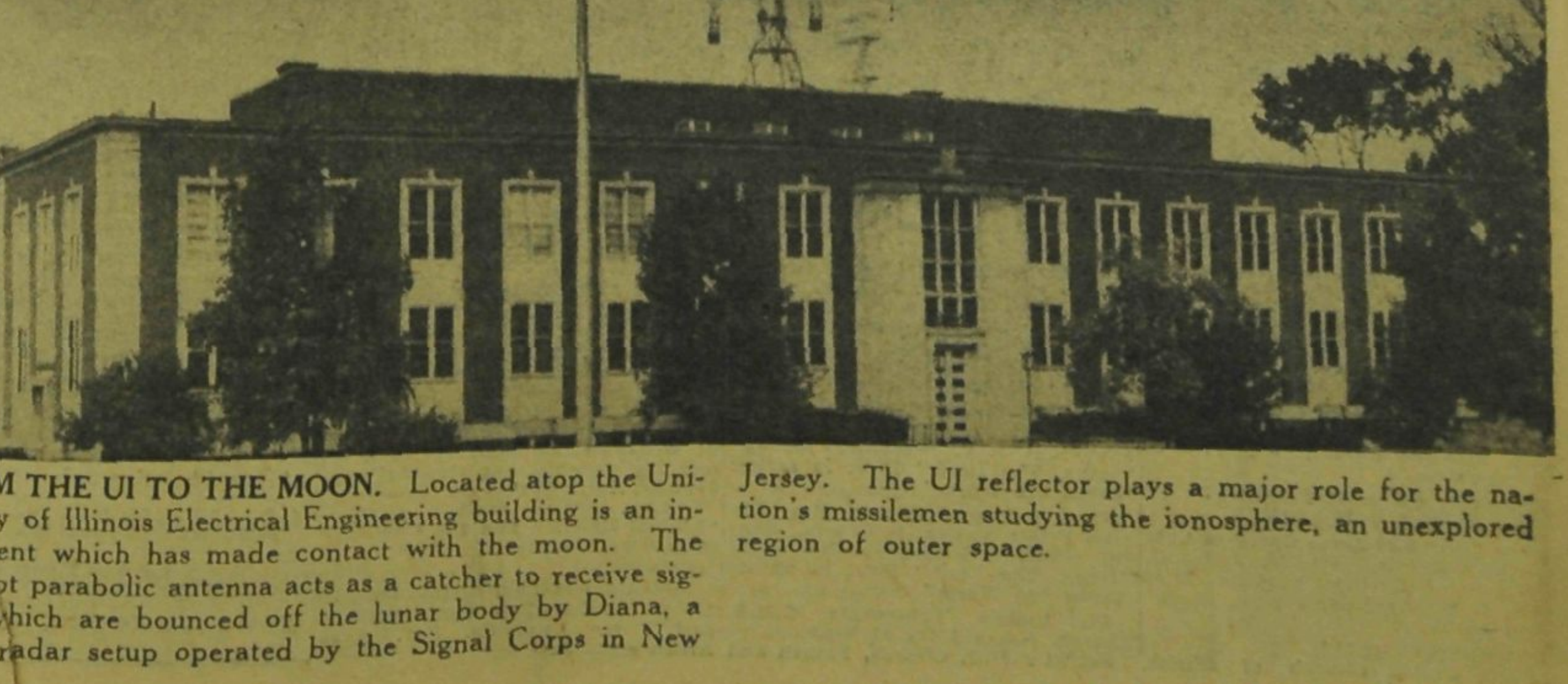
Applications of the University study are unlimited. It may herald the advance of a new commercial era—allowing long range transmission to cover half of the world.

"Anyone who can se the moon when the signals are transmitted and who has the proper receiving equipment, can pick up the reflected waves," Webb said.

It could mean the advent of a world-wide TV hookup or a global radio station as well as an advanced method of tracking satellites.



FOR FUTURE UI PHYSICISTS. At the left is an architect's model of the first section of the new University of Illinois Physics Building and at the right is a planned dormitory to house 300 single graduate students. Both facilities, just two examples of the University's vigorous expansion program, will be completed by August, 1959. A second section of the Physics Building, of equal size, will be located to the left of the first unit and should be finished in 1961. Estimated cost of the first unit and equipment is $5,425,000, to be financed by state appropriation. The residence hall is a self-liquidating project.



FROM THE UI TO THE MOON. Located atop the University of Illinois Electrical Engineering building is an instrument which has made contact with the moon. The 28-foot parabolic antenna acts as a catcher to receive signals which are bounced off the lunar body by Diana, a giant radar setup operated by the Signal Corps in New Jersey. The UI reflector plays a major role for the nation's missilemen studying the ionosphere, an unexplored region of outer space.

Engineering Open House

The News-

Champaign-Urbana — The Home Of

Vol. LXIII. No. 227. ALL 3 WIRE Services — UP, INS, AP SATURDAY, MARCH 15, 195

UI ENGINEERS ME

Vast Facilities Offered

GROUND OR AIR OR SPACE, IT'S GOING ON HERE

15 Classrooms, Labs 65,000 Volumes Are Provided On Campus

Whether it's glass-blowing, analysis of light or atom smashing —the University of Illinois College of Engineering has developed more than 15 main buildings full of facilities and equipment where students can "make realities of drawings" for the modern world.

One of the largest engineering campuses in the country, the College features large, well-equipped laboratories, modern tools and spacious classrooms in addition to special equipment needed for extra research.

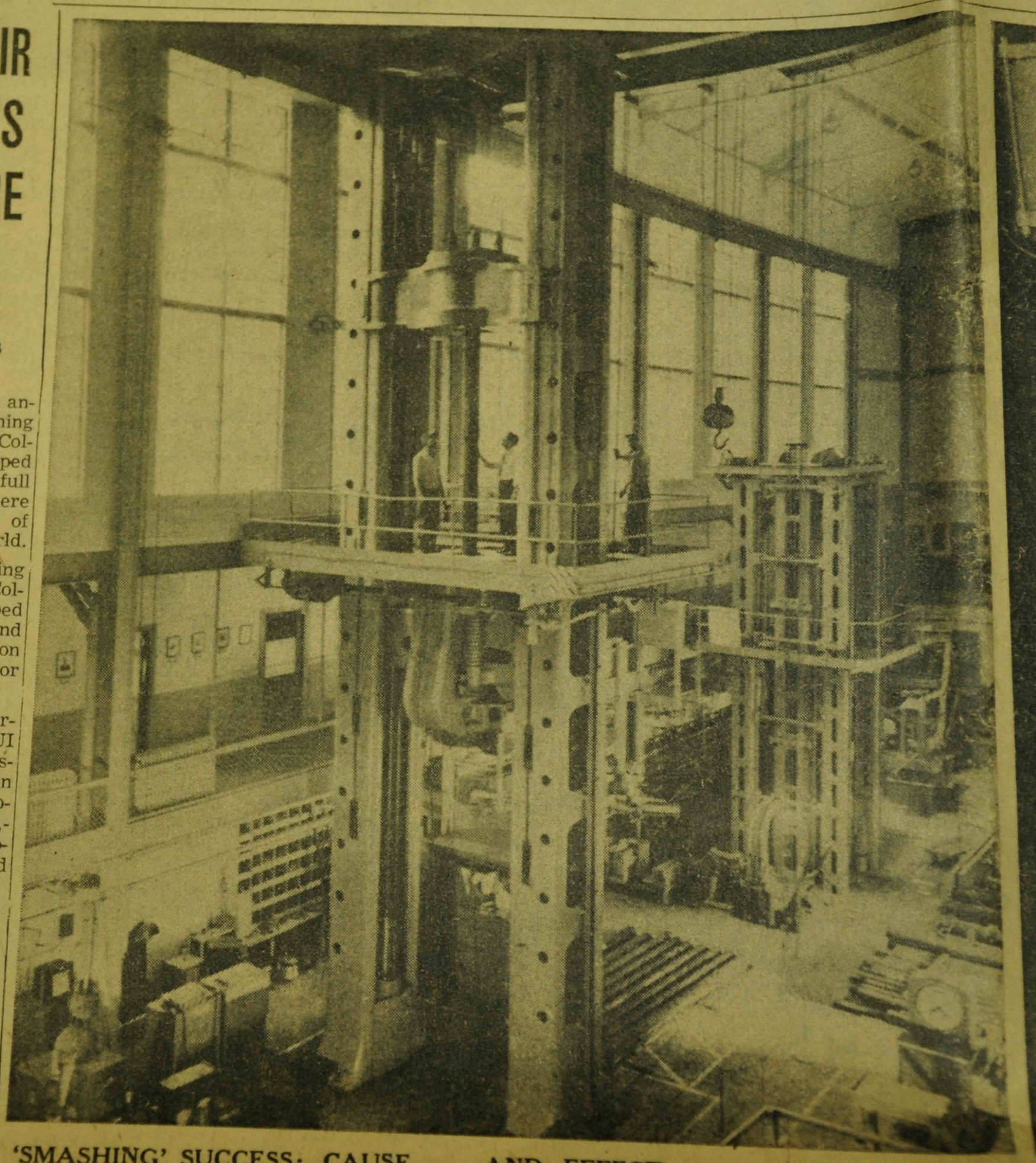
As part of its rapid and vigorous expansion program, the UI has started building a new Physics Building, to be completed in 1961. The first unit and equipment, costing an estimated $5,425,000 and financed by state appropriations, will be completed by August, 1959.

In close cooperation with the Argonne National Laboratory, Atomic Energy Commission center for nuclear reactor design, the College of Engineering has plans under way for materials to keep pace with the nuclear age and the advanced engineering training which will be needed, *including a boiling-water loop for reactor power utilization studies, apparatus for a series of basic nuclear metallurgy experiments, and instrumentation for a nuclear measurements laboratory.*

In the field of "atomic brains," the UI has developed Illiac, a high-frequency digital computer.

It boasts one of the country's first cyclotrons and its atom smashing "kissing cousin," the Betatron, developed by a UI professor, and now able to deliver 20 million to 400 million volts.

Highlights of the College's equipment lineup include:



'SMASHING' SUCCESS: CAUSE . . . AND EFFECT. The Theoretical and Applied Mechanics Department of the University of Illinois College of Engineering annually claims a "smashing" success for one of its exhibits at the Open House—the 3 million pound materials testing machine. The three-story high structure, one of the largest in the Midwest, is checked over picture before the boom is lo result as a large concrete But the testing [illegible] erting tremendous force p

UI SCHOLARSHIP LIST GROWING STEADILY

Engineering Challenge

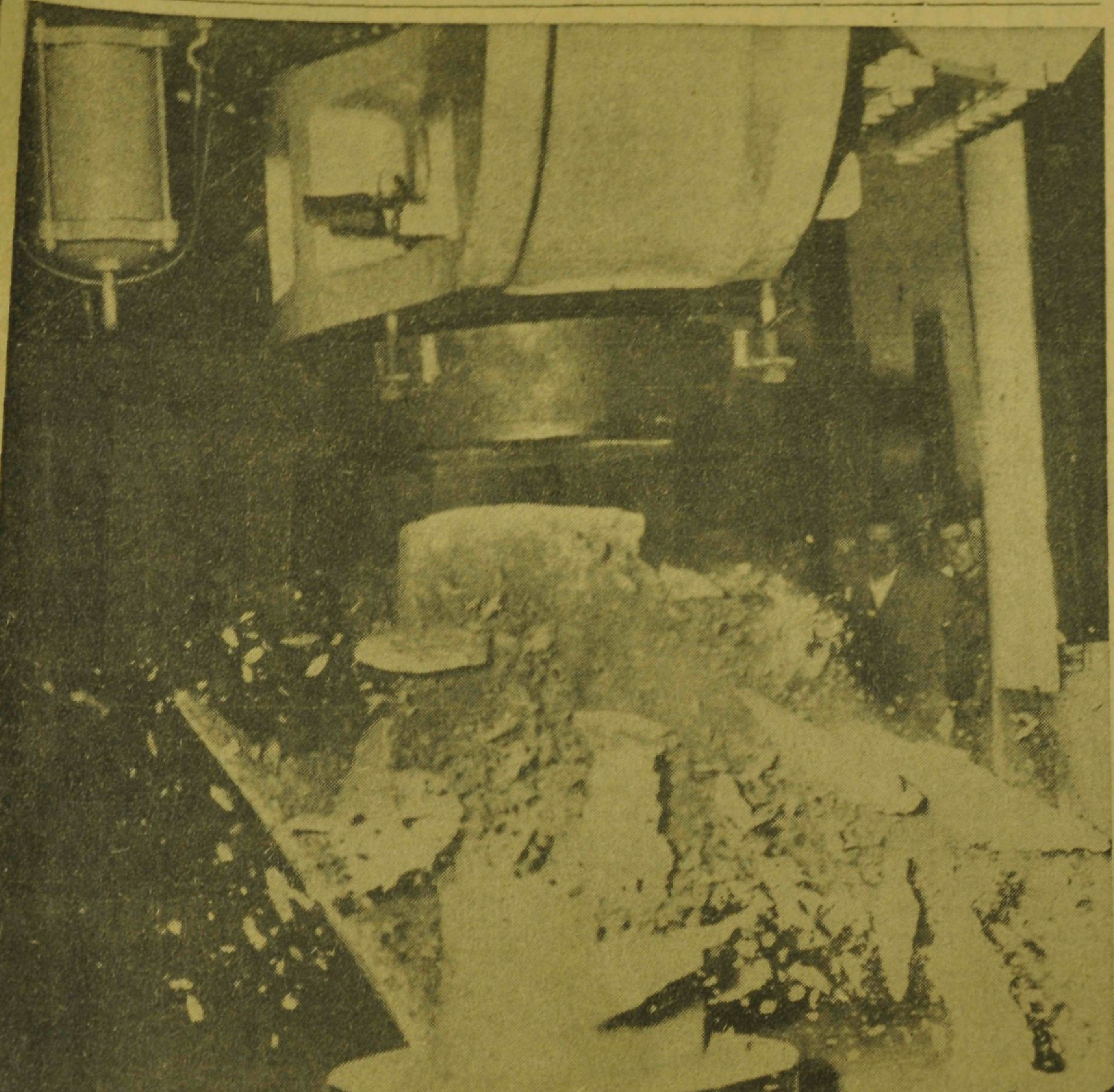
We are glad to welcome you to the Urbana-Champaign campus, and are happy that you have been able to attend Engineering Open House. We hope that the opportunity to see classrooms, laboratories, and exhibits will dramatize for you some of the fascinating

...ews-Gazette
...a — The Home Of The University of Illinois
...URDAY, MARCH 15, 1958.—10 Pages ★ ★ ★ Price Five Cents

Souvenir Edition

...S MEET CHALLENGE

...fered By University

...ecked over by UI officials in the left ...om is lowered. At the right is the ...cylinder is reduced to rubble. [illegible] ...either tension or compression [illegible]

it is an invaluable aid in checking beams, columns and joints for loading and types of failure. Without such a machine, the knowledge of behavior of large or complex [illegible] theoretical [illegible]

STUDENTS SEE GREAT SCHOOL IN OPERATION

Come From All Illinois To Observe Training During 'Open House'

By BILL LYON
News-Gazette Staff Writer

High school students from throughout the state today were introduced to the challenge of engineering and how it is being met in University of Illinois classrooms. The students were in Champaign-Urbana f.. the seventh annual College of Engineering Open House.

The College threw open its lab and classroom doors and, through 133 specially-prepared student exhibits, revealed the means by which one of the country's best engineering colleges trains the men of tomorrow to forge the world of tomorrow in industry, in research and in teaching.

From the construction of present bridges on the ground to bridging space, the exhibits illustrated how engineers are trained in the use of materials, men and money for the service of mankind.

Youthful local visitors saw firsthand displays of engineering prowess which conquered the engineering challenge of the past, is conquering the challenge of the present, and is preparing to conquer the challenge of the future.

The conquest of space and nuclear energy, they learned, will pose the challenge of the future, and the UI College of Engineering has already geared itself to the demands of the nuclear age. It is moving swiftly toward a soundly balanced nuclear education program, which now includes [illegible] special courses and instru[illegible] [illegible] ing sp[illegible], from [illegible] T-square calculations [illegible] urements of rocket craft to [illegible]tary engineers who will be confronted with the problem of removal of radiation and atomic waste, metallurgy majors who must develop special alloys to stand the [illegible]

PROF. BARDEEN, NOBEL WINNER, ON UI STAFF

Diana Pitches Pulses:

UI Is Receiving Radio Signals From Moon

... the College of Engineering has plans under way for materials to keep pace with the nuclear age and the advanced engineering training which will be needed, including a boiling-water loop for reactor power utilization studies, apparatus for a series of basic nuclear metallurgy experiments, and instrumentation for a nuclear measurements laboratory.

In the field of "atomic brains," the UI has developed Illiac, a high-frequency digital computer.

It boasts one of the country's first cyclotrons and its atom smashing "kissing cousin," the Betatron, developed by a UI professor, and now able to deliver 20 million to 400 million volts.

Highlights of the College's equipment lineup include:

A ten-ton crane, ten testing machines capable of exerting forces up to 50,000 , 200,000 pounds; centrifugal pumps which can furnish 13,500 gallons of water per minute with a head of 35 feet; a heavily reinforced concrete floor, 16 inches thick, in a testing laboratory.

Vibrators, drying ovens and refrigerating units; a machine for testing railway cars and brake shoes which can operate at train speeds equivalent to 100 miles per hour.

Radium sources amounting to 350 milligrams; electric and magnetic measurements in vacuum tube circuits; a lab for biophysics and work in light and spectroscopy; welding booths, voltmeters, experimental electrometallurgy equipment, arc-melting furnaces and endless-belt grinding machines.

There are more than 20 drafting and drawing rooms, each designed to accommodate just enough students so that element of some personal instruction can be maintained.

To supplement the wide scope of class instruction, technical literature is available in the vast storehouse of the Engineering Library, with some 65,000 volumes. Over 650 technical journals are received here, and another 55,000 volumes on engineering is housed in the University's General Library, one of the most extensive in the world.

'SMASHING' SUCCESS: CAUSE . . . AND EFFECT. The Theoretical and Applied Mechanics Department of the University of Illinois College of Engineering annually claims a "smashing" success for one of its exhibits at the Open House ... machine. The three-story high structure, one of the largest in the Midwest, is checked ... picture before the beam ... result, as a ... erting tremendous force ...

UI SCHOLARSHIP LIST GROWING STEADILY

A new scholarship has been added to the growing list of financial aid and awards available to University of Illinois Engineering students, the Scholarship Committee of the College of Engineering announced.

Two International Telephone and Telegraph Corp. scholarships, each worth $750 for one year, have joined the ranks. They are renewable and will be given annually to undergraduates in electrical engineering, physics or mathematics upon recommendation of the Committee.

Other financial aids include an award from the Hamilton Watch Co., to encourage a greater understanding of social sciences and humanities among engineering students; the Wiley Scholarship, for summer travel; the Armco scholarship; Ira O. Baker first prize for the outstanding civil engineering student of the year.

The Epstein Award; the Leslie Abbott Rose Award for engineering students with technical excellence as well as a cultural background; Mining Engineering scholarships, available to all graduates of accredited high schools, including two groups of four-year durations.

Scholarships at the UI, of which the College of Engineering has a large share, include 2,700 offering free tuition and 600 more providing cash awards.

Engineering Challenge

We are glad to welcome you to the Urbana-Champaign campus, and are happy that you have been able to attend Engineering Open House. We hope that the opportunity to see classrooms, laboratories, and exhibits will dramatize for you some of the fascination and importance of the engineering profession, as well as the high standards and quality of preparation increasingly demanded by engineering practice.

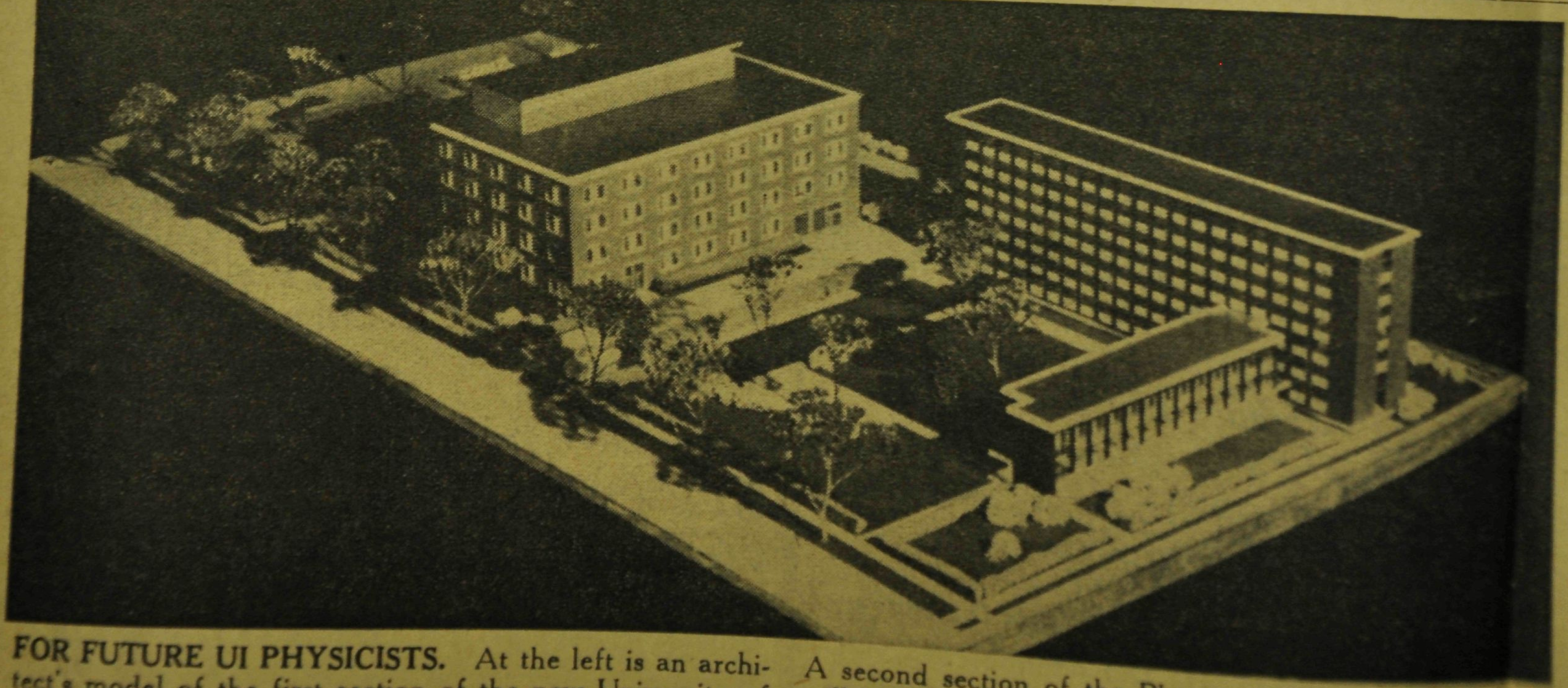
Engineering is steadily coming to be more important both to our nation and for the modern world. The challenge of more difficult and more complicated problems is rising just as rapidly. There is a continuing need both for more and ever better engineers, and a promising future in industry, in research, and in teaching. The conquest of space, of the atom and nucleus, of new power sources, new materials, new means of transportation and communication, plus solutions for all the resulting human problems, demands the very best efforts from all of us.

We in engineering education are constantly improving the quality of instruction in both level and breadth, including basic and engineering sciences, advanced areas of professional specialization, and humanistic studies.

The better your preparation for college, the faster and farther we can advance you up the lengthening trail of professional competence. With our balance of extensive high-level research and graduate degree programs, set against our varied undergraduate offerings in all fields, we at the University of Illinois are especially well-equipped to help you meet these demands of modern engineering.

It has been a pleasure to have you as our guests, to show you a few of our activities here and of the possibilities in engineering and education for the future. We trust that you have enjoyed your stay with us, and the exhibits prepared and displayed for you by our student body. We hope, too, that you, your faculty advisers and families, and your schoolmates will come to see us again.

W. L. EVERITT,
Dean, College of Engineering.



FOR FUTURE UI PHYSICISTS. At the left is an architect's model of the first section of the new University of Illinois Physics Building and at the right is a planned dormitory to house 300 single graduate students. Both facilities, just two examples of the University's vigorous expansion program, will be completed by August, 1959. A second section of the Physics Building, of equal size, will be located to the left of the first unit and should be finished in 1961. Estimated cost of the first unit and equipment is $5,425,000, to be financed by state appropriation. The residence hall is a self-liquidating project.

P... N... O...

Inc... Illino... staff ... the ... avail...

Dr. ... sor o... physic... ulty ... Urban... when ...

— Dr. ... William... physic... ventio... point ... makin... the r... tries.

Dr. ... ers sp... and w... covete... of Swe...

Altho... longer ... deen's ... hailed ... in its i... of the ...

"Ever... repeate... benefits ... from b... sical w... with w... eries a... practica... ly usabl... Dean W...

FROM ... versity ... strumen... 28-foot ... nals wh... giant r...

...over by UI officials in the left ... lowered. At the right is the ...

it is an invaluable aid in checking beams, columns and joints for loading and types of failure. Without such a ... machine, the knowledge of behavior of large or complex ...

The conquest of space and nuclear energy, they learned, will pose the challenge of the future, and the UI College of Engineering has already geared itself to the nuclear age. It demands of the nuclear age ... is moving swiftly toward a soundly balanced nuclear education program, which now includes ... special courses and instruction ...

PROF. BARDEEN, NOBEL WINNER, ON UI STAFF

Included on the University of Illinois Engineering and Physics staff is a member who captured the greatest scientific honor available — the Nobel Prize.

Dr. John Bardeen, 48, professor of electrical engineering and physics became the first UI faculty member on the Champaign-Urbana campus to win the award when he and two other physicists — Dr. Walter Brattain and Dr. William Shockley — received the physics prize in 1956 for their invention and development of the point contact transistor, now making revolutionary changes in the radio and telephone industries.

Dr. Bardeen and his co-workers split the $38,633 three ways and were presented the highly coveted prize by King Gustav VI of Sweden.

Although the transistor is no longer than the tip of Dr. Bardeen's little finger, it has been hailed as an advance comparable in its importance to the invention of the vacuum tube 50 years ago.

"Even more, it has become a repeatedly cited symbol of the benefits that can and do result from basic research in the physical world and the dizzy speed with which fundamental discoveries are being translated into practical application immediately usable to all of us," declared Dean William L. Everitt.

Diana Pitches Pulses:

UI Is Receiving Radio Signals From Moon

The University of Illinois is conducting experiments which may lead to the control of rocket craft in outer space by bouncing radio waves off the moon.

Using a huge nine ton parabolic reflector on top of the Electrical Engineering Building, members of the moon watch project are playing a space game of catch, snagging radio waves which are hurtled at the lunar body by Diana, a radar transmitter at Ft. Monmouth, N. J., and reflected off it.

Prof. H. D. Webb, head of the project, predicted that this may be the first step in pioneering interplanetary space travel — sending radio commands to craft in lunar space and receiving radio reports on the galaxy in return.

"The moon is serving as a high class radio relay station for basic UI research to study the characters of the waves shot through outer space," explained Prof. Webb.

And every three months the UI sends their reports on the quick two-way trip away from our earth to the Signal Corps for analysis.

When Diana pitches her pulses some 250,000 miles, only a very few are recovered. Transmission power is 40,000 watts, and only about 100 of these ever reach the moon.

"And by the time these are scattered all over the universe, we receive but one-millionth of one-billionth of one watt," Prof. Webb pointed out.

But this is enough.

The web-like 28-foot diameter UI antenna picks off the waves while they are traveling 186,000 miles per second. There is no slow motion involved in their 500,000 mile trek—they make it in two and a half seconds.

Made of steel and aluminum and including a highly restricted antenna, the EE device was erected last June and has been in operation since mid-summer.

The reflector cost $55,000 and the antenna, excluding installation and modifications which were made on the building, $100,000.

The UI's contract with the Signal Corps has been extended until July 31, 1958.

Applications of the University study are unlimited. It may herald the advance of a new commercial era—allowing long range transmission to cover half of the world.

"Anyone who can se the moon when the signals are transmitted and who has the proper receiving equipment, can pick up the reflected waves," Webb said.

It could mean the advent of a world-wide TV hookup or a global radio station as well as an advanced method of tracking satellites.

... ing space, from ... T-square calculations for measurements of rocket craft to sanitary engineers who will be confronted with the problem of removal of radiation and atomic waste, metallurgy majors who must develop special alloys to stand the gaff of outer space and bio-engineers to make interplanetary travel safe.

The touring high school students also learned how engineers are conquering the challenge of the present by widening and strengthening the horizon of human progress on the ground and in the air.

They saw this proof in 15 buildings. It was dramatically demonstrated in transportation.

They saw the exacting detail and precision used by engineers to test building materials until combinations of concrete and steel, which are practically indestructable, have been accomplished.

And from the world of yesterday, they saw how UI engineers have taken the basic fundamentals developed by their pioneering predecessors which, for example, enabled man to speak long distances through physics and electrical engineering.

And they learned that UI engineering graduates comprise an extensive list of who's who, including the developer of the Betatron, the transistor, the first talking pictures, skyscrapers and bridges which have withstood earthquakes and men who contributed to the launching of America's first satellite.

They learned from the past, present and future challenges the UI met and will meet that the word "engineering" means a better civilization.

FROM THE UI TO THE MOON. Located atop the University of Illinois Electrical Engineering building is an instrument which has made contact with the moon. The 28-foot parabolic antenna acts as a catcher to receive signals which are bounced off the lunar body by Diana, a giant radar setup operated by the Signal Corps in New Jersey. The UI reflector plays a major role for the nation's missilemen studying the ionosphere, an unexplored region of outer space.